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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,591	08/28/2001	Yoshihisa Kiyotoki	NIP-239	3265

7590 06/08/2005

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EXAMINER
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SHEEHAN, JOHN P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/939,591

**Applicant(s)**

KIYOTOKI ET AL.

**Examiner**

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 25, 2005 has been entered.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

I. The specification at page 47, the second full paragraph, lines 3 and 4 (as submitted in the amendment on April 25, 2005) refers to claims 15, 16, 17 and 20 respectively. It is not proper to refer to the claims in the specification in that the claims may be amended and/or renumbered during prosecution.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112, 1<sup>st</sup> Paragraph***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 21 to 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

I. In claims 21 and 23 the claim language, "member that slides over the other member" lacks support in the application as filed and therefore is new matter.

II. In claim 25 the claim language, "member that slides over other member" lacks support in the application as filed and therefore is new matter.

***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> Paragraph***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 21 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In claims 21 and 23, line 2, "the other member" lacks a clear antecedent.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 25, 26, 31, 32, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohriner et al. (Ohriner, US Patent No. 4,803,045).

Ohriner teaches an iron based hard facing alloy having excellent wear resistance (column 2, lines 5 to 10), a composition that overlaps the alloy composition recited in instant claims (column 2, lines 40 to 51) and which contains eutectic carbides (column 2, lines 35 to 36 and column 4, lines 45 to 47) as recited in applicants' claims. Ohriner teach specific example alloys that are encompassed by the alloy composition recited in applicants' claims (column 3, the table, Heats B1, 6995, 6961A, 6998, 6983A, 6961B, 70226B and 7030) each having hardness values that are also encompassed by the hardness values recited in the instant claims (columns 5 and 6, Tables 1 and 2).

The claims and Ohriner differ in that Ohriner does not teach the process steps recited in applicants' claims and is silent with respect to the coefficient of friction of the disclosed alloys and the microstructure of the carbides.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the specific example alloy compositions taught by Ohriner are encompassed by the instant claims. In view of this, Ohriner's alloys would be expected to possess all the same properties as recited in the instant claims including the coefficient of friction and the microstructure of the carbides recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical

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or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' *In re Spada*, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

With respect to the process steps recited in the claims it is the Examiner's position that, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process limitations recited in the instant product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

Further, with respect to claims 37 and 38 it is the Examiner's position that these claims which recite that the claimed alloy is joined with a base metal encompasses the hard facing utility taught by Ohriner.

3. Claims 21, 22, 27, 28, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (Nakamura, US Patent No. 4,789,412, cited by applicants' in the IDS submitted February 28, 2002).

Nakamura teaches specific examples of cobalt alloys that are encompassed by the alloy composition recited in applicants' claims (columns 7 and 8, the Table, ally Nos. 1 to 17). Nakamura teaches that the disclosed alloy contains eutectic carbides (column 2, line 55). Nakamura teaches that the disclosed alloy has utility as a nozzle of a gas turbine (column 1, lines 10 to 12).

The claims and Nakamura differ in that Nakamura does not teach the process steps recited in applicants' claims and is silent with respect to the coefficient of friction, microstructure of the carbides and hardness of the disclosed alloys.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the specific example alloy compositions taught by Nakamura are encompassed by the instant claims. In view of this, Nakamura's alloys would be expected to possess all the same properties as recited in the instant claims including the coefficient of friction, microstructure of the carbides and hardness recited in the instant claims, *In re Best*, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' *In re Spada*, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

With respect to the process steps recited in the claims it is the Examiner's position that, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process limitations recited in the instant product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

Further, with respect to claims 27 and 28 it is the Examiner's position that applicants' claim language, "A fluid device" encompasses "a nozzle of a gas turbine" taught by Nakamura.

4. Claims 23, 24, 29, 30, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dong et al. (Dong, US Patent No. 4,911,768).

Dong teaches a nickel base hard facing alloy having a composition that overlaps the alloy recited in applicants' claims (column 2, lines 5 to 20 and 52 to 57). Dong also teaches a specific example alloy that is encompassed by applicants' claims (column 3, the table, Alloy No. 3). Dong teaches that the alloy contains carbides (column 2, lines 21 and 42 and column 3, lines 15 to 27). Dong also teaches that the alloy can be used in valves (column 1, lines 58 to 62).

The claims and Dong differ in that Dong does not teach the process steps recited in applicants' claims and is silent with respect to the coefficient of friction, microstructure of the carbides and hardness of the disclosed alloys.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the specific example alloy composition taught by Dong are encompassed by the instant claims. In view of this, Dong's alloys would be expected to possess all the same properties as recited in the instant claims including the coefficient of friction, microstructure of the carbides and hardness recited in the instant claims, *In re Best*, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical

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or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

With respect to the process steps recited in the claims it is the Examiner's position that, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process limitations recited in the instant product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

Further, with respect to claims 35 and 36 it is the Examiner's position that these claims which recite that the claimed alloy is joined with a base metal encompasses the hard facing utility taught by Dong.

Further, with respect to claims 29 and 30 it is the Examiner's position that applicants' claim language, "A fluid device" encompasses the valves taught by Dong (column 1, lines 58 to 62).

### ***Response to Arguments***

1. Applicant's arguments filed April 25, 2005 have been fully considered but they are not persuasive.
2. Applicants' argument that the amendments to the claims changing "'alloy' to 'member', with a specific purpose" "distinguishes the present invention over the prior art

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alloys cited by the Examiner" is not persuasive. The "'member' with a specific purpose" is considered to be an intended use recited in the preamble of the applicants' claims. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). Applicants have not explained how the intended use recited in the claims results in a structural difference between the prior art and the claimed invention. Further the "'member' with a specific purpose" limitation, that is, the claim language, "member that slides over the other member" appears in the preamble of the claims. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Applicants have not pointed out why the preamble in the instant claims should, contrary to general practice, be accorded weight in the instant claims.

Applicants' argument that the references do not teach plastic hot working is not persuasive. As set forth in the statement of the rejections, with respect to the process

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steps recited in the claims, it is the Examiner's position that, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process limitations recited in the instant product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

**ONCE A PRODUCT APPEARING TO BE SUBSTANTIALLY IDENTICAL IS FOUND AND A 35 U.S.C. 102/103 REJECTION MADE, THE BURDEN SHIFTS TO THE APPLICANT TO SHOW AN UNOBSVIOUS DIFFERENCE**

"The Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983)

Applicants have not provided any evidence to establish that the claimed alloy actually is different than the prior art alloys having compositions that are encompassed by the instant claims.

Applicants' arguments that the claimed carbide distribution and grain size of 30 microns or less provides the alloys with "significant advantages" and "enhanced wear-resistance" (remarks, pages 12 and 13) are not persuasive. Applicants have not provided any evidence to support their allegation that the claimed distribution and grain size of 30 microns or less provides the alloys with "significant advantages" and "enhanced wear-resistance" "It is well settled that unexpected results must be

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established by factual evidence. Mere argument or conclusory statements in the specification do not suffice." In re Deblauwe, 222 USPQ 191, 196 (Fed. Cir. 1984). Mere lawyer's arguments, and conclusory statements in the specification, unsupported by objective evidence, are insufficient to establish unexpected results." In re Wood, Whittaker, Stirling and Ohta, 199 USPQ 137, 140 (CCPA 1978).

Applicants' arguments that each of Ohriner and Dong teach eutectic carbides that are continuously distributed while the carbides of the instant invention exist in the form of grains or clusters are not persuasive. Applicants have not set forth any basis for their conclusion that Ohriner and Dong teach eutectic carbides that are continuously distributed. For example, where in each of these references is it disclosed that the eutectic carbide is continuously distributed. Further, in view of the instant language, "mesh-like eutectic carbide" (for example claim 21, line 6) it does not appear that applicants' carbides are in the form of grains or clusters as applicants' have argued.

As set forth in the statement of each of the rejections, in view of the fact that each of the references teaches specific example alloys containing eutectic carbides and having alloy compositions that are encompassed by the instant claims, it would be expected that the alloys taught by the references would possess all the same properties as recited in the instant claims including the coefficient of friction, microstructure of the carbides and hardness recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ

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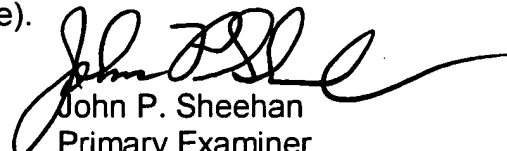
430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

jps